REMARKS

The following is intended as a full and complete response to the Office Action mailed on June 28, 2005. Claims 1, 3-6, 8-32, 34-37, 39-55 and 57 were examined. The Examiner rejected all of the claims under 35 U.S.C. §103(a) as obvious in view of Asente (U.S. Patent No. 6,310,622) in combination with Takakura (U.S. 5,509,113). The Examiner also rejected all of the claims under the judicially-created doctrine of obviousness-type double patenting.

Rejections under 35 U.S.C. §103(a)

Claim 1 recites the limitations of (i) selecting a grid type from a plurality of grid types, where the grid type has an associated set of grid parameters, (ii) generating grid parameter values based on supplied spacing parameter values, (iii) generating a set of points based on the generated grid parameters and supplied spacing parameter values, and (iv) mapping the set of points to a defined constraint to establish locations of the objects relative to the constraint. As previously discussed with the Examiner, the present invention provides a way to efficiently map objects onto a defined constraint, where a grid is used to set the spacing of the objects. The limitations recited in claim 1 set forth the relationship between the selected grid and the defined constraint that enables such a mapping. As the Examiner openly admits in the Office Action, Ascente does not teach or suggest the limitation of selecting a grid type from a plurality of grid types, wherein the grid type is associated with one or more grid parameters or the limitation of generating grid parameter values based on supplied spacing parameter values and dimension data. Since Takakura also fails to teach or suggest these limitations, all of the pending claims are in condition for allowance.

Takakura addresses the problems associated with accurately producing railroad and road symbols on maps, especially when those symbols have curved portions. As set forth in the

description of Figures 2 and 3a-3d, coordinate data input by a user via a pen or mouse into as well as the length, D, of the "figure part" determines the placement of the figure part along a curved line. More specifically, the first coordinate point input into the system and stored in the temporary storage memory is called point Q. A new coordinate point, called point P, is then input into the system. So long as the distance between Q and P (i.e., P-Q) is less than the length of the figure part, then the system is configured to draw the figure part on the curved line. A straight line is first drawn from Q to P, and an intermediate point, Pi, is generated at every distance, D, along the line. The system then draws a figure part at every interval between Q and P, starting at Q, where the first interval is between Q and the first intermediate point, Pi,1, the second interval is between Pi,1 and the second intermediate point, Pi,2, etc. The last intermediate point between Q and P is called Pe. After all of the figure parts are drawn between Q and P, this point is then stored in the temporary storage memory, thereby becoming the new point Q. A second, new coordinate point, P, is then input into the system, and the steps of drawing additional figure points along the curved line is repeated. This process continues until all new coordinate points, P, have been input into the system. See Takakura at col. 5, line 45-col. 6, line 57. As this description makes clear, as well as the description of Figure 4, the spacing of the figure parts on the curved line is determined solely by the coordinate points Q and P input into the system as well as the length, D, of the figure part. There is no mention whatsoever of any type of grid or grid-like element being used in this process.

The Examiner appears to argue that step S27 of Figure 2, where a black circle is drawn automatically on every "connective point" of the figure parts (i.e., on every Pi), is equivalent to the steps of selecting a grid-type, generating grid parameter values based on supplied spacing parameter values and dimension data, and generating a set of points based on the generated grid

parameter values and the supplied spacing parameter values. This is simply a gross misreading of the teachings of Takakura.

First, the limitations recited in claim 1 clearly delineate how the set of points that establish the locations of objects relative to the defined constraint are generated from the selected grid (by generating grid parameter values) and the supplied spacing parameters. No such relationship exists in step S27 in Takakura. This step includes nothing more than drawing a black circle at each intermediate point, Pi. There is no generation of grid parameter values that are then used to define the set of intermediate points, as suggested by the Examiner. As explained above, the intermediate points follow directly from coordinate data input into the system by the user and the length, D, of the figure part. There simply is no use of a grid or grid-like element.

Second, the black circles are not a grid or a grid-like element. They are circles, each of which is a separate graphics-type object. The circles are shown quite clearly in Figure 3d of Takakura. The reference simply doesn't support the Examiner's interpretation of what the black circles are.

Third, and quite importantly, the black circles have nothing to do with determining the positions or spacing of the figure parts. The "white and black pattern railroad," which the method of Figure 2 is used to generate, is a smoothly-curved map object. The black circles are used to fill in the breaks between the figure parts once they are positioned along the curved line to smooth out the overall object. This is clearly seen by comparing Figures 3c and 3d of Takakura. Most significantly, the fact that the black circles are added to the white and black pattern railroad after the figure parts are already positioned along the curved line proves that these black circles have nothing to do with positioning or spacing the figure parts. Thus, the black circles cannot and do not have the same functionality as the claimed grid type, which, as

claimed, is used to generate the set of points that define the positioning and spacing of the objects that are mapped onto the defined constraint.

As the foregoing illustrates, Takakura does not cure the recognized deficiencies of Ascente. Therefore, the combination of Ascente and Takakura does not teach or suggest each and every limitation of pending claim 1. For this reason, claim 1 and claims 3-6 and 8-31, dependent thereon, are in condition for allowance.

In addition, independent claims 32, 55 and 57 recite limitations similar to those discussed above in connection with allowable claim 1. These independent claims are therefore allowable for at least the same reasons as claim 1. Further, since claim 34-37 and 39-54 depend from allowable claim 32, these claims also are in condition for allowance.

Rejections under Obviousness-Type Double Patenting

The Examiner rejected all of the pending claim under the judicially-created doctrine of obviousness-type double patenting. Applicant respectfully requests that the decision on the double patenting rejection be deferred until the prosecution has concluded. Only after the pending claims are allowed will Applicant be in a position to determing whether filing a terminal disclaimer is appropriate.

CONCLUSION

Based on the above remarks, Applicant believes that he has overcome all of the rejections and objections set forth in the Office Action mailed June 28, 2005 and that the pending claims are in condition for allowance. If the Examiner has any questions, please contact the Applicant's undersigned representative at the number provided below.

Respectfully submitted,

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